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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,405	09/30/2003	Yasuyuki Kiuchi	116754	3755
25944	7590	07/15/2005	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			FREISTEIN, ANDREW B	
			ART UNIT	PAPER NUMBER
			1626	

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/673,405

Applicant(s)

KIUCHI ET AL.

Examiner

Andrew B. Freistein

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-73 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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### DETAILED ACTION

Claims 1-73 are currently pending in the instant application.

#### *Priority*

This application is a Continuation of PCT/JP02/02965, filed March 27, 2002.

Acknowledgement is made of Applicant's claims for foreign priority of Japanese application 2001-98301, filed March 30, 2001 and Japanese application 2001-274861, filed September 11, 2001.

#### *Election/Restrictions*

The Markush Group set forth in the claims includes both independent and distinct inventions, and patentably distinct compounds (species) within each invention. However, this application discloses and claims a plurality of patentably distinct inventions far too numerous to list individually. Moreover, each of these inventions contains a plurality of patentably distinct compounds, which are too numerous to list individually. **For the reasons provided below, restriction to one of the following Groups is required under 35 U.S.C. § 121**, wherein a Group is a set of patentable distinct inventions of a broad statutory category (e.g. compounds, methods of use, methods of making, etc.):

Restriction to one of the following inventions is required under 35 U.S.C. § 121:

- I. **Claims 1, 3-8, 13, 16, 19-23, 27-31, 37-38, 40, 42-43**, drawn to compounds of General Formula (4) wherein a 1,2-diazole is the only heterocyclic ring, classified in class 548/369.4.

- II. **Claims 2 and 12**, drawn to compounds of General Formula (6), classified in class 544/302 and 544/298.
- III. **Claims 9-10, 14, 17-18, 24-26, 32-33, 39 and 41**, drawn to compounds classified in class 548/365.7.
- IV. **Claim 11**, drawn to a compound of Chemical formula (14), classified in class 548/365.1.
- V. **Claim 15**, drawn to a compound of Chemical formula (15), classified in class 548/162.
- VI. **Claims 34 and 35**, drawn to compounds classified in class 546/276.1.
- VII. **Claims 44, 51 and 58**, drawn to a process for producing compounds of General formula (1), classified in various subclasses of classes 540, 544, 546, 548 and 549.
- VIII. **Claims 45, 52 and 59**, drawn to a process of producing compounds of General formula (2), classified in various subclasses of classes 540, 544, 546, 548 and 549.
- IX. **Claims 46, 53 and 60**, drawn to a process for producing compounds of General formula (3), classified in various subclasses of classes 540, 544, 546, 548 and 549.
- X. **Claims 47, 54 and 61**, drawn to a process for producing compounds of General formula (4), classified in various subclasses of classes 540, 544, 546, 548 and 549.

- XI. Claims 48, 55 and 62**, drawn to a process for producing compounds of General formula (5), classified in various subclasses of classes 540, 544, 546, 548 and 549.
- XII. Claims 49, 56 and 63**, drawn to a process for producing compounds of General formula (6), classified in various subclasses of classes 540, 544, 546, 548 and 549.
- XIII. Claims 50, 57 and 64**, drawn to a process for producing compounds of General formula (44), classified in various subclasses of classes 540, 544, 546, 548 and 549.
- XIV. Claim 65**, drawn to an electron-transfer agent and a compound of General formula (1) as a charge transfer material, classified in various subclasses of classes 540, 544, 546, 548 and 549.
- XV. Claim 66**, drawn to an electron-transfer agent and a compound of General formula (2) as a charge transfer material, classified in various subclasses of classes 540, 544, 546, 548 and 549.
- XVI. Claim 67**, drawn to an electron-transfer agent and a compound of General formula (3) as a charge transfer material, classified in various subclasses of classes 540, 544, 546, 548 and 549.
- XVII. Claim 68**, drawn to an electrophotographic photoreceptor containing a charge-transfer material of a compound of General formula (1), classified in various subclasses of classes 540, 544, 546, 548 and 549.

- XVIII. Claim 69**, drawn to an electrophotographic photoreceptor containing a charge-transfer material of a compound of General formula (2), classified in various subclasses of classes 540, 544, 546, 548 and 549.
- XIX. Claim 70**, drawn to an electrophotographic photoreceptor containing a charge-transfer material of a compound of General formula (3), classified in various subclasses of classes 540, 544, 546, 548 and 549.
- XX. Claim 71**, drawn to an organic electroluminescence element containing an organic film wherein the film contains a compound of General formula (1), classified in various subclasses of classes 540, 544, 546, 548 and 549.
- XXI. Claim 72**, drawn to an organic electroluminescence element containing an organic film wherein the film contains a compound of General formula (2), classified in various subclasses of classes 540, 544, 546, 548 and 549.
- XXII. Claim 73**, drawn to an organic electroluminescence element containing an organic film wherein the film contains a compound of General formula (3), classified in various subclasses of classes 540, 544, 546, 548 and 549.

In accordance with the decisions in *In re Harnisch*, 631 F.2d 716, 206 USPQ 300 (CCPA 1980); and *Ex parte Hozumi*, 3 USPQ2d 1059 (Bd. Pat. App. & Int. 1984), restriction of a Markush Group is proper where the compounds within the group either (1) do not share a common utility, or (2) do not share a substantial structural feature disclosed as being essential to that utility. In addition, a Markush Group may encompass a plurality of independent and distinct inventions where two or more members are so unrelated and diverse that a prior art reference anticipating the claim

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with respect to one of the members would not render the other member(s) obvious under 35 U.S.C. § 103.

**Where an election of any one of Groups I, II, or VII – XXII is made, an election of a single compound is further required** including an exact definition of each substitution on the base molecule, wherein a single member at each substituent group or moiety is selected. For example, if a base molecule has a substituent group R1, wherein R1 is recited to be any one of H, OH, COOH, aryl, alkoxy, halogen, amino, etc., then applicant must select a single substituent of R1, for example OH or aryl and each subsequent variable position.

In the instant case, upon election of a single compound the Office will review the claims and disclosure to determine the scope of the independent invention encompassing the elected compound (compounds that are so similar thereto as to be within the same inventive concept and reduction to practice). The scope of an independent invention will encompass all compounds within the scope of the claim, which fall into the same class and subclass as the elected compound, but may also include additional compounds, which fall in related subclasses. Examination will then proceed on the elected compound as defined by common classification AND the entire scope of the invention encompassing the elected compound as defined by common classification. A clear statement of the examined invention, defined by those class(es) and subclass(es) will be set forth in the first action on the merits. Note that the restriction requirement will not be made final until such time as applicant is informed of the full scope of compounds along with (if appropriate) the process of using or making

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said compound under examination. This will be set forth by reference to specific class(es) and subclass(es) examined. Should applicant traverse on the ground that the compound are not patentably distinct, applicant should submit evidence or identity such evidence now of record showing the compound to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in rejection under 35 U.S.C. § 103(a) of the other.

All compounds falling outside the class(es) and subclass(es) of the selected compound and any other subclass encompassed by the election above will be directed to nonelected subject matter and will be withdrawn from consideration under 35 U.S.C. § 121 and 37 C.F.R. 1.142(b). Applicant may reserve the right to file divisional applications on the remaining subject matter. (The provisions of 35 U.S.C. § 121 apply with regard to double patenting covering divisional applications.)

Applicant is reminded that upon cancellation of claims to a nonelected invention, the inventions must be amended in compliance with 37 C.F.R. 1.48(b) if one of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 C.F.R. 1.48(b) and by the fee required under 37 C.F.R. 1.17(i).

If desired upon election of a single compound, applicant can review the claims and disclosure to determine the scope of the invention and can set forth a group of compounds which are so similar, within the same inventive concept and reduction to practice. Markush claims must be provided with support in the disclosure for each



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member of the Markush group. See MPEP 608.01(p). Applicant should exercise caution in making a selection of a single member for each substituent group on the base molecule to be consistent with the written description.

***Rational Establishing Patentable Distinctiveness Within Each Group***

Each Group listed above is directed to or involves the use of compounds which are recognized in the art as being distinct from one another because of their diverse chemical structure, their different chemical properties, modes of action, different effects and reactive conditions (MPEP 806.04, MPEP 808.01). Additionally, the level of skill in the art is not such that one invention would be obvious over the other invention (Group), i.e. they are presumed patentable over each other. Chemical structures that are similar are presumed to function similarly, whereas chemical structures that are not similar are not presumed to be function similarly. The presumption even for similar chemical structures though is not irrebuttable, but may be overcome by scientific reasoning or evidence showing that the structure of the prior art would not have been expected to function as the structure of the claimed invention. Note that in accordance with the holding of ***Application of Papesch***, 50 CCPA 1084, 315 F.2d 381, 137 USPQ 43 (CCPA 1963) and ***In re Lulu***, 223 USPQ 1257 (Fed. Cir. 1984), chemical structures are patentably distinct where the structures are either not structurally similar, or the prior art fails to suggest a function of a claimed compound would have been expected from a similar structure.

***The above groups represent general areas wherein the inventions are independent and distinct, each from the other because of the following reasons:***

**Inventions I-VI** are unrelated compounds. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions or different effects (MPEP 806.04, MPEP 808.01). In the instant case, the claims of Inventions I-VI are drawn to compounds with different structures and formulas, which are classified in different classes and subclasses as indicated above.

**Inventions VII – XIII** are unrelated methods of preparation. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions or different effects (MPEP 806.04, MPEP 808.01). In the instant case the inventions are drawn to distinct methods of preparing distinct compounds, which will use different starting materials, reagents, and reaction conditions as illustrated in pages 64-88 of the Specification. Moreover, the compounds produced are those of Inventions I-VI, which differ in structures and formulas and are classified in different classes and subclasses (see above).

**Inventions XIV – XVI** are unrelated products. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions or different effects (MPEP 806.04, MPEP 808.01). In the instant case, Inventions XIV – XVI are each drawn to an electron-transfer agent and a compound as a charge-transfer material. Inventions XIV-XVI differ from each other, because they are drawn to compounds, which differ in structure, function, and reactivity and are classified in different classes and subclasses (see arguments above).

**Inventions XVII – XIX** are unrelated products. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions or different effects (MPEP 806.04, MPEP 808.01). In the instant case, Inventions XVII-XIX are drawn to an electrophotographic photoreceptor with a photosensitive layer containing a charge-transfer material, which is a compound of the General formulas (1), (2), or (3). The inventions are unrelated, because the compounds making up the photosensitive layers have different structures and formulas, which are classified in different classes and subclasses as indicated above.

**Inventions XX – XXII** are unrelated products. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions or different effects (MPEP 806.04, MPEP 808.01). In the instant case, Inventions XX-XXII are drawn to an organic electroluminescence element containing an organic film wherein the film contains a compound, which is of the General formulas (1), (2), or (3). The inventions are unrelated, because the compounds making up the photosensitive layers have different structures and formulas, which are classified in different classes and subclasses as indicated above.

In addition, due to the plethora of classes and subclasses in each of the Groups, a serious burden is imposed on the examiner to perform a complete search of the defined areas. Therefore, because of the reasons given above, the restriction set forth

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is proper and not to restrict would impose a serious burden in the examination of the application.

### ***Advisory of Rejoinder***

The following is a recitation of MPEP 821.04, Rejoinder:

Where product and process claims drawn to independent and distinct inventions are presented in the same application, applicant may be called upon under 35 U.S.C. 121 to elect claims to either the product or process. See MPEP § 806.05(f) and § 806.05(h). The claims to the nonelected invention will be withdrawn from further consideration under 37 CFR 1.142. See MPEP § 809.02(c) and § 821 through § 821.03. However, if applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn process claims, which depend from or otherwise include all the limitations of the allowable product claim will be rejoined.

Where the application as originally filed discloses the product and the process for making and/or using the product, and only claims directed to the product are presented for examination, when a product claim is found allowable, applicant may present claims directed to the process of making and/or using the patentable product by way of amendment pursuant to 37 CFR 1.121. In view of the rejoinder procedure, and in order to expedite prosecution, applicants are encouraged to present such process claims, preferably as dependent claims, in the application at an early stage of prosecution. Process claims, which depend from or otherwise include all the limitations of the patentable product will be entered as a matter of right if the amendment is presented prior to final rejection or allowance. Amendments submitted after final rejection are governed by 37 CFR 1.116. Process claims which do not depend from or otherwise include the limitations of the patentable product will be withdrawn from consideration, via an election by original presentation (see MPEP § 821.03). Amendments submitted after allowance are governed by 37 CFR 1.312. Process claims which depend from or otherwise include all the limitations of an allowed product claim and which meet the requirements of 35 U.S.C. 101, 102, 103, and 112 may be entered.

Where product and process claims are presented in a single application and that application qualifies under the transitional restriction practice pursuant to 37 CFR 1.129(b), applicant may either: (A) elect the invention to be searched and examined and pay the fee set forth in 37 CFR 1.17(s) and have the additional inventions searched and examined under 37 CFR 1.129(b)(2); or (B) elect the invention to be searched and examined and not pay the additional fee (37 CFR 1.129(b)(3)). Where no additional fee is paid, if the elected invention is directed to the product and the claims directed to the product are subsequently found patentable, process claims which either depend from or include all the limitations of the allowable product will be rejoined. If applicant chooses to pay the fees to have the additional inventions searched and examined pursuant to 37 CFR 1.129(b)(2) even if the product is found allowable, applicant would not be entitled to a refund of the fees paid under 37 CFR 1.129(b) by arguing that the process claims could have been rejoined. 37 CFR 1.26(a) states that "[T]he Commissioner may refund any fee paid by mistake or in excess of that required. A change of purpose after the payment of a fee...will not entitle a party to a refund of such fee..." In this case, the fees paid under 37 CFR 1.129(b) were not paid by mistake nor paid in excess, therefore, applicant would not be entitled to a refund. In the event of rejoinder, the rejoined process claims will be fully

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examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. If the application containing the rejoined claims is not in condition for allowance, the subsequent Office action may be made final, or, if the application was already under final rejection, the next Office action may be an advisory action. Form paragraphs 8.42 through 8.44 should be used to notify applicant of the rejoinder of process claims which depend from or otherwise include all the limitations of an allowable product claim.

In the event of rejoinder, the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104 - 1.106. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112. If the application containing the rejoined claims is not in condition for allowance, the subsequent Office action may be made final, or, if the application was already under final rejection, the next Office action may be an advisory action.

The following is a recitation from paragraph five, "Guidance on Treatment of Product and Process Claims in light of *In re Ochiai*, *In re Brouwer* and 35 U.S.C. §103(b)" (1184 TMOG 86(March 26, 1996)):

"However, in the case of an elected product claim, rejoinder will be permitted when a product claim is found allowable and the withdrawn process claim **depends from or otherwise includes all the limitations of** an allowed product claim. Withdrawn process claims not commensurate in scope with an allowed product claim will not be rejoined." (emphasis added)

Pursuant to MPEP § 821.04 and *In re Ochiai*, 71 F.3d 1565, 37 USPQ 1127 (Fed. Cir. 1995), rejoinder of product claims with process claims commensurate in scope with the allowed product claims will occur following a finding that the product claims are allowable. Until such time, a restriction between product claims and process claims is deemed proper. Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the process claims should be amended during prosecution to maintain either dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.**

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A telephone call was made to Attorney Thomas Pardini, Esq. on July 5, 2005 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 C.F.R. 1.143).

Applicant is reminded that upon the cancellation of the claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claims remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 C.F.R. 1.48(b) and by the fee required under 37 C.F.R. 1.17(i).

#### ***Telephone Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew B. Freistein whose telephone number is (571) 272-8515. The examiner can normally be reached Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph McKane can be reached on (571) 272-0699. The fax phone number for the organization where this application or proceeding is assigned is (573) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

Andrew B. Freistein  
Patent Examiner, AU 1626

**KAMAL A. SAEED, PH.D.**  
**PRIMARY EXAMINER**

*Kamal Saeed*  
*for* Joseph K. McKane  
Supervisory Patent Examiner, AU 1626  
Date: July 6, 2005